
USC-CSE TECHNOLOGY WEEK

Annual Research Review and Workshops '99

Our Annual Research Review and Executive Workshop will be held February 8-12, in Los Angeles. This year's theme is Software Engineering Knowledge Acquisition and Management. Details are provided in the accompanying package, with some assumptions about your participation.

Executive Workshop February 10, 1999

In concert with our Annual Research Review February 8-9, 1999 and a Focused Workshop on February 11-12, we are holding our annual USC-CSE Executive Workshop on Wednesday, February 10. A number of our executive-level Affiliates have signed up to discuss emerging corporate-level trends and strategies in acquiring and managing software engineering knowledge assets (see the overview and agenda below, along with an updated summary of the week's events and a registration package).

Please encourage your executives to capitalize on this opportunity to benchmark their level of capability and assess emerging technologies in software engineering knowledge capture and dissemination.

Barry Boehm

USC-CSE TECHNOLOGY WEEK

Annual Research Review and Workshops '99

USC-CSE Technology Week

February 8-12, 1999

The first two days of Technology Week are devoted to our Annual Research Review (ARR), which features presentations by CSE Principals and graduate students on their latest recent research results and tool capabilities through presentations and demonstrations. The ARR includes an Affiliates' panel providing perspectives on Software Engineering Trends and University Research Priorities.

The topic for the Executive Workshop will be Software Engineering Knowledge Acquisition and Management. Many of our Affiliates are formulating corporate knowledge asset management strategies in software engineering or other areas, including life-long learning and corporate knowledge automation. At USC-CSE, we are finding increased demand for SE graduate courses, distance learning, and certificate programs. We are trying to sort out what delivery mechanisms are best suited to SE, and what types of education and training are best done by corporations, by universities, and by commercial organizations such as Learning Tree.

The Executive Workshop will feature executive perspectives on these issues from Dr. Alan Salisbury, CEO of Learning Tree; Dr. Steve Cross, Director of the SEI; Prof. Len Silverman, our Dean of Engineering; and several executives from our Affiliate organizations.

The Focused Workshop on February 11-12 will address Automating SE Knowledge Delivery. One of our new MBASE-related thrusts involves development of a SE Decision Assistant (SEDA) capability, via intelligent agents which can monitor a SE project's artifacts and suggest improved project decisions. Several of our Affiliates are looking into similar capabilities, and we'd like to explore the relative importance and difficulty of alternative technical approaches in this area.

Technology Week Agenda:

Monday, Feb. 8-9: Annual Research Review

- COCOMO II and Extensions; SW Architecture
- MBASE, SEDA, WinWin; Demos; Affiliates' Panel
- Steering Group meeting

Wednesday, Feb. 10: Executive Workshop

- Software Engineering Knowledge Acquisition and Management

Thursday-Friday, Feb. 11-12: Focused Workshop

- Automating SE Knowledge Delivery

USC-CSE TECHNOLOGY WEEK

Annual Research Review, February 8 and 9, 1999

USC-CSE Annual Research Review
Andrus Gerontology Center Auditorium, USC Campus
Los Angeles, California

February 8 and 9, 1999

The first two days of Technology Week are devoted to our Annual Research Review (ARR). The ARR features presentations by CSE Principals and graduate students on their latest recent research results and tool capabilities through presentations and demonstrations. The ARR often includes a rollout of a new capability available to Affiliates. This year's ARR includes an Affiliates' panel providing perspectives on software engineering trends and implications for USC-CSE research. The second evening of the ARR involves a dinner meeting and feedback session with the Affiliates' Steering Group members.

The research results and tool capabilities to be presented this year include

- COCOMO II and Extensions in
 - Tools Effects
 - Quality/Defects (COQUALMO)
 - COTS Integration (COCOTS)
 - RAD Schedule Impacts (CORADMO)
 - Productivity Improvement (COPROMO)
- Model Based Architechting and Software Engineering (MBASE)
- Software Architecture
 - Unified Modeling Language (UML) View Integration
 - UML and MBASE
 - UML and C2
 - Architecture Description Language (ADL) Comparative Analysis
 - ACME
 - Applications of Instrumented Connectors
- Software Engineering Decision Aides (SEDA)
- WinWin, The Win-Win Spiral Model and Groupware Support System.

Annual Research Review Preliminary Agenda:

February 8, 1999 — AM

COCOMOII.1999; COCOMO II Tools Effects; COQUALMO

Break

COCOTS; CORADMO and COPROMO

PM

UML View Integration; UML and MBASE; UML and C2

Break

ADL Comparative Analysis; ACME; and Applications of Instrumented Connectors

February 9, 1999 — AM

Model Clashes and MBASE; Requirements Simplifiers and Complicators; MBASE Guidelines

Break

Library View of Digital Library Projects; WinWin Negotiation Analysis; SE Decision Assistance

PM

TBD

Break

Affiliates' Panel: Futures & University Research Priorities — Tony Jordano, SAIC;

Fred Maymir-Ducharme, Lockheed Martin; Arnold Pittler, Motorola; Dennis Weiss, Lucent

USC-CSE TECHNOLOGY WEEK

Executive Workshop, February 10, 1999

USC-CSE Executive Workshop
Software Engineering Knowledge Acquisition and Management
Davidson Conference Center, USC Campus
Los Angeles, California

February 10, 1999

Our commercial, aerospace, and government Affiliates are becoming increasingly engaged with the nurturing and accessibility of their corporate software engineering (and other) knowledge resources. With the increasing pace of change in information technology and associated software engineering best practices, these knowledge resources--both human and automated--are the keys to competitive success and cost-effective delivery of public services.

Creating and sustaining these Software Engineering resources creates major challenges in such areas as:

- Continuing education of software engineers and managers;
- Continuing update of domain, product, and process knowledge;
- Assured delivery of up-to-date knowledge at time of need;
- Selective dissemination of updated information to those most concerned.

At USC, we have been increasingly addressing issues of distance learning, continuing education, and automating delivery of software engineering knowledge. With this workshop, we wish to explore with Affiliate executives and complementary software engineering knowledge providers (commercial education and training providers; tool and methodology providers; nonprofits and consortia) how this picture is likely to unfold, and where are the best places for university education and research to contribute.

Executive Workshop Preliminary Agenda

8:15 - 10:00 am Overview Presentations

Dr. Len Silverman, Dean of Engineering, USC

Dr. Barry Boehm, Director, USC-CSE

Dick Law, Lockheed Martin

Dr. Alan Salisbury, CEO, Learning Tree

10:30 am - 12:00 noon Panel: Commercial Sector Issues and Initiatives

Dr. Robert Martin, VP, Lucent

Dr. Emil Sarpa, VP, Sun

Mike Sweeney, VP, EDS

Walker Royce, VP, Rational

Dr. Rich DeMillo, VP, Bellcore

1:00 pm - 2:30 pm Panel: Aerospace Sector Issues and Initiatives

Dr. Art Pyster, Chief Scientist-SW, FAA

Dr. Gary Kang, VP, TRW

Dr. David Evans, VP, Aerospace Corp.

Wayne Sebera, VP, Litton

3:00 pm - 4:30 pm Emerging Technology

Dr. Steve Cross, Director, CMU-SEI

Prof. Lewis Johnson, USC-ISI

Doug Rosenberg, President, Iconix

Judd Neale, CEO, SPC

Prof. Dan Port, USC-CSE

USC-CSE TECHNOLOGY WEEK

Annual Research Review and Executive Workshops '99

USC-Focused Workshop
Automating Software Engineering Knowledge Delivery
Seaver Science Auditorium, USC Campus
Los Angeles, CA,

February 11-12, 1999

Automating software engineering knowledge delivery runs a spectrum from providing automated Web/Internet access to corporate software engineering resources, through project decision rationale capture and legacy software design recovery, to agents providing software engineering decision advice and automated applications generation based on domain knowledge.

We have been developing various initial capabilities along these lines. The web site for our annual series of digital library student projects (<http://sunset.usc.edu/classes>) contains guidelines for scoping and structuring the team products and processes. Our WinWin system has a rationale capture capability linking the rationales for win conditions, issues, and the adoption or rejection of proposed issue-resolving options. Lewis Johnson's Media Doc system provide provides task-oriented information about legacy software systems. We have developed some initial Software Engineering Decision Assistant (SEDA) tools for process model selection, risk identification, and software cost-quality attribute tradeoff decisions. Bob Balzer and Dave Wile have developed several domain knowledge-based application generators.

We and several of our Affiliate organizations have found that there are a number of issues involved in developing and operating such capabilities.

Some examples are:

- ❖ What are the best ways of structuring knowledge to support different classes of services?
- ❖ What are the particular challenges in structuring and providing useful knowledge about software processes and software products?
- ❖ How does one address the formidable problem of knowledge base evolution in rapidly-changing technology areas?
- ❖ How does one effectively integrate a set of individual services?

We have been gathering experience on some aspects of these questions, and look forward to comparing these experiences with Affiliates exploring similar issues. A candidate set of Affiliate presenters is indicated below.

USC-CSE TECHNOLOGY WEEK
Focused Workshop, February 11-12, 1999

Preliminary Agenda

Thursday, February 11

7:30 - 8:15 am	Continental Breakfast
8:15 - 9:30 am	Reprise of USC Experiences Barry Boehm, Dan Port, Bob Balzer, Lewis Johnson
9:30 - 10:00 am	Break
10:00 - 11:30 am	Affiliate Experiences (Invited)(* - Accepted) John Salasin, DARPA* Rick Hefner, TRW Dave Weiss, Lucent Lisa Finneran, SPC* Marc Kellner, SEI Doug White, AFRL
11:30 - 12:00 pm	Breakout Group Determination Candidate Topic: Group Leader, Scribe Automating Product Knowledge: Belz/Kerner, Egyed Automating Process Knowledge: Brown, Abi-Antoun Knowledge Capture & Delivery: Johnson, Park/Port
12:00 - 1:00pm	Lunch
1:00 - 5:30pm	Breakout Groups

Friday, February 12

7:30 - 8:15am	Continental Breakfast
8:15 - 10:45am	Breakout Groups
10:45 - 11:30am	USC Response

USC-CSE TECHNOLOGY WEEK

ANNUAL RESEARCH REVIEW, EXECUTIVE WORKSHOP and FOCUSED WORKSHOP

HOTEL ACCOMMODATIONS

February 8-12, Los Angeles

The Radisson Hotel Midtown

3540 South Figueroa Street
Los Angeles, CA 90007
T: (213) 748-4141
F: (213) 748-0043

The Radisson Hotel Midtown is conveniently located across the street from the USC campus.

The room rate for USC-CSE Technology Week, Annual Research Review & Executive Workshop attendees is a very attractive \$85/night for single rooms and \$90/night for doubles.

Reservations may be made by calling (213) 748-4141; please attempt to make your reservations by 1/98.

The deadline for room reservations is January 31, 1999.

The Los Angeles Athletic Club

431 West Seventh Street
Los Angeles, CA 90014
T: (213) 625-2211
F: (213) 689-1194

The Club is a European-style hotel featuring deluxe rooms with conversation areas and executive desks, spacious tile baths with hair dryers and plush terry robes, in-room coffee makers, honor bars, irons and pressing boards, and elegant European furnishings.

Guests can expect complimentary use of the Los Angeles Athletic Club's legendary athletic facilities, a complimentary fruit and cheese basket upon arrival, complimentary coffee, tea, and fresh muffins delivered Monday-Friday, complimentary morning newspaper delivery, concierge desk, and nightly turndown service with Belgian chocolates.

The room rate for USC-CSE Technology Week, Annual Research Review & Executive Workshop attendees is an attractive \$120/night.

Reservations may be made by calling (800) 421-8777 or (213) 625-2211.

The deadline for room reservations is January 1, 1999.

*University of Southern California
Center for Software Engineering –Technology Week
Annual Research Review - Executive Workshop - Focused Workshop*

February 8-12, 1999

Participant Information Sheet

Name:

Title:

Company:

Department:

Address:

City:

State:

Zip:

Phone:

Fax:

Email:

I will be attending: (check all that apply)

Monday February 8:

Andrus Gerontology Center Auditorium
3715 McClintock Avenue

Annual Research Review
COCOMO II and Extensions; SW Architecture ___ Lunch ___

Tuesday February 9:

Andrus Gerontology Center Auditorium
3715 McClintock Avenue

Annual Research Review
MBASE, SEDA, WinWin, Demos, Affiliates Panel ___ Lunch ___
Steering Group meeting ___

Wednesday February 10:

Davidson Conference Center
3415 S. Figueroa Street

Executive Workshop
Software Engineering Knowledge Acquisition and Management ___ Lunch ___

Thursday February 11:

Seaver Science Center
920 W. 37th Street

Focused Workshop
Automating SE Knowledge Delivery(panelist) ___ (participant) ___ Lunch ___

Friday February 12:

Seaver Science Center
920 W. 37th Street

Focused Workshop
Automating SE Knowledge Delivery(panelist) ___ (participant) ___ Lunch ___

I will need: (check all that apply)

Parking: _____

Special dietary consideration ___ please specify _____

Handicap parking and access information ___

Please reply to:

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